WHAT IS CLAIMED IS:

1.   A sound signal encoding apparatus, comprising:

sampling means for dividing and sampling a signal inputted therein into a plurality of sound signal sections based on the frequency ranges of said sound signal; each of said sound sections having a pure sound component and a non-pure sound component, and

encoding means for   encoding said sound signal sections after quantizing said sound signal sections divided and sampled based on the frequency ranges of said sound signal,

said encoding means comprising

a deciding unit for deciding which one in said pure sound component and non-pure sound component is more than the other of said pure sound component and non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal;

a first quantizing unit for quantizing only said pure sound component at a first quantization level when said deciding unit is operated to decide that said pure sound component is more than said non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal; and

a second quantizing unit for quantizing both said pure sound component and said non-pure sound component by way of the predetermined bits of data allocated to both said pure sound component and said non-pure sound component when said deciding unit is operated to decide that said non-pure sound component is more than said pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal sampled based on the frequency ranges of said sound signal.

2.   A sound signal cording apparatus as set forth in claim 1 which further comprises analyzing means for analyzing said sound signal inputted into said sampling means based on the psycho-acoustic model of human hearing characteristics, said deciding means being operative to decide on the basis of the results analyzed by said analyzing means about which one in said pure sound component and non-pure sound component is more than the other of said pure sound component and non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal.

3.   A sound signal cording apparatus as set forth in claim 2 in which said analyzing means is operative to calculate the absolute amount of energy of said pure sound component before analyzing said sound signal inputted into said sampling means based on said absolute amount of energy of said pure sound component.

4.   A sound signal cording apparatus as set forth in claim 2 in which said analyzing means is operative to calculate the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted into said sampling means based on said absolute amount of energy of said non-pure sound component.

5.   A sound signal cording apparatus as set forth in claim 2 in which said analyzing means is operative to calculate a difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted into said sampling means based on said difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component.

6.   A sound signal cording apparatus as set forth in claim 2 in which said analyzing means is operative to calculate the absolute amount of energy of said non-pure sound component and a difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted into said sampling means based on said absolute amount of energy of said non-pure sound component and said difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component.

7.   A sound signal delivery system, comprises: a sound signal encoding apparatus as set forth in claims 1 to 6, a server unit for accumulating the sound signals coded by the sound signal coding apparatus, a plurality of terminal units for requesting said sound signals coded by the sound signal coding apparatus, and a network between said server unit and said terminal units to have said server unit and said terminal units electrically connected to each other, said sever unit being operative to deliver said sound signals coded by the sound signal coding apparatus to said terminal units through said network when said terminal units are operative to request said sever unit to deliver said sound signals coded by the sound signal coding apparatus to said terminal units.

8.   A sound signal encoding method, comprising:

sampling step of dividing and sampling a signal inputted into a plurality of sound signal sections based on the frequency ranges of said sound signal; each of said

5   sound sections having a pure sound component and a non-pure sound component, and

encoding step of encoding said sound signal sections after quantizing said sound signal sections divided and sampled based on the frequency ranges of said sound signal,

said encoding step comprising:

10   a deciding step of deciding which one in said pure sound component and non-pure sound component is more than the other of said pure sound component and non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal;

a first quantizing step of quantizing only said pure sound component at a first

15   quantization level when said deciding unit is operated to decide that said pure sound component is more than said non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal; and

a second quantizing step of quantizing both said pure sound component and

20   said non-pure sound component by way of the predetermined bits of data allocated to both said pure sound component and said non-pure sound component when said deciding unit is operated to decide that said non-pure sound component is more than said pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal sampled based on the

25   frequency ranges of said sound signal.

9.   A sound signal cording method as set forth in claim 8 which further comprises an analyzing step of analyzing said sound signal inputted in said sampling step based on the psycho-acoustic model of human auditory organs characteristics,

30   said deciding step being to decide on the basis of the results analyzed in said analyzing step about which one in said pure sound component and non-pure sound component is more than the other of said pure sound component and non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal.

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10.   A sound signal cording method as set forth in claim 9 in which said analyzing step is of calculating the absolute amount of energy of said pure sound

component before analyzing said sound signal inputted in said sampling step based on said absolute amount of energy of said pure sound component.

11. A sound signal cording method as set forth in claim 9 in which said
5 analyzing step is of calculating the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted in said sampling step based on said absolute amount of energy of said non-pure sound component.

12. A sound signal cording method as set forth in claim 9 in which said
10 analyzing step is of calculating a difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted in said sampling step based on said difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component.
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13. A sound signal cording method as set forth in claim 9 in which said analyzing step is of calculating the absolute amount of energy of said non-pure sound component and a difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound
20 component before analyzing said sound signal inputted in said sampling step based on said absolute amount of energy of said non-pure sound component and said difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component.

25 14 A recodable media having a sound signal encoding program recorded therein and capable of being recorded by computers, said sound signal encoding program comprises:
      sampling step of dividing and sampling a signal inputted in a plurality of sound signal sections based on the frequency ranges of said sound signal; each of said
30 sound sections having a pure sound component and a non-pure sound component, and
      encoding step of encoding said sound signal sections after quantizing said sound signal sections divided and sampled based on the frequency ranges of said sound signal,
      said encoding step comprising:
35   a deciding step of deciding which one in said pure sound component and non-pure sound component is more than the other of said pure sound component and non-pure sound component with respect to each of said sound signal sections divided

and sampled based on the frequency ranges of said sound signal;

a first quantizing step of quantizing only said pure sound component at a first quantization level when said deciding unit is operated to decide that said pure sound component is more than said non-pure sound component with respect to each of said

5   sound signal sections divided and sampled based on the frequency ranges of said sound signal; and

a second quantizing step of quantizing both said pure sound component and said non-pure sound component by way of the predetermined bits of data allocated to both said pure sound component and said non-pure sound component when said

10   deciding unit is operated to decide that said non-pure sound component is more than said pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal sampled based on the frequency ranges of said sound signal.

15   15.   A recodable media having a sound signal encoding program recorded therein as set forth in claim 14, which further comprises an analyzing step of analyzing said sound signal inputted in said sampling step based on the psycho-acoustic model of human auditory organs characteristics, said deciding step being to decide on the basis of the results analyzed in said analyzing step about which one in said pure sound

20   component and non-pure sound component is more than the other of said pure sound component and non-pure sound component with respect to each of said sound signal sections divided and sampled based on the frequency ranges of said sound signal.

16.   A recodable media having a sound signal encoding program recorded therein

25   as set forth in claim 15, in which said analyzing step is of calculating the absolute amount of energy of said pure sound component before analyzing said sound signal inputted in said sampling step based on said absolute amount of energy of said pure sound component.

30   17.   A recodable media having a sound signal encoding program recorded therein as set forth in claim 15, in which said analyzing step is of calculating the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted in said sampling step based on said absolute amount of energy of said non-pure sound component.

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18.   A recodable media having a sound signal encoding program recorded therein as set forth in claim 15, in which said analyzing step is of calculating a difference

between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted in said sampling step based on said difference between the absolute amount of energy of said pure sound component and the absolute amount of

5   energy of said non-pure sound component.

19.   A recodable media having a sound signal encoding program recorded therein

as set forth in claim 15, in which said analyzing step is of calculating the absolute

10   amount of energy of said non-pure sound component and a difference between the absolute amount of energy of said pure sound component and the absolute amount of energy of said non-pure sound component before analyzing said sound signal inputted in said sampling step based on said absolute amount of energy of said non-pure sound component and said difference between the absolute amount of energy of said pure

15   sound component and the absolute amount of energy of said non-pure sound component.

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